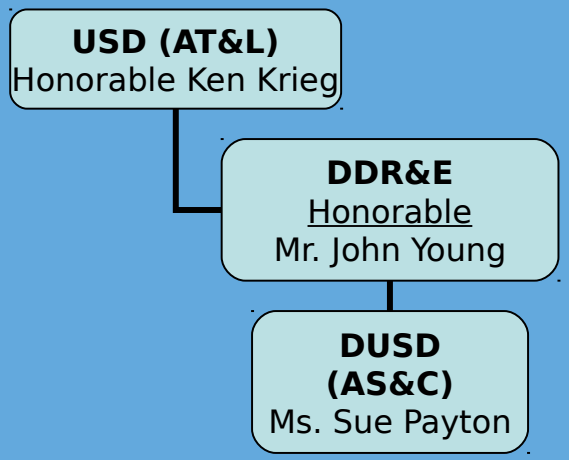
# Advance Concept Technology Demonstration (ACTD)

## Defense Acquisition University

## ACTD Funding Process



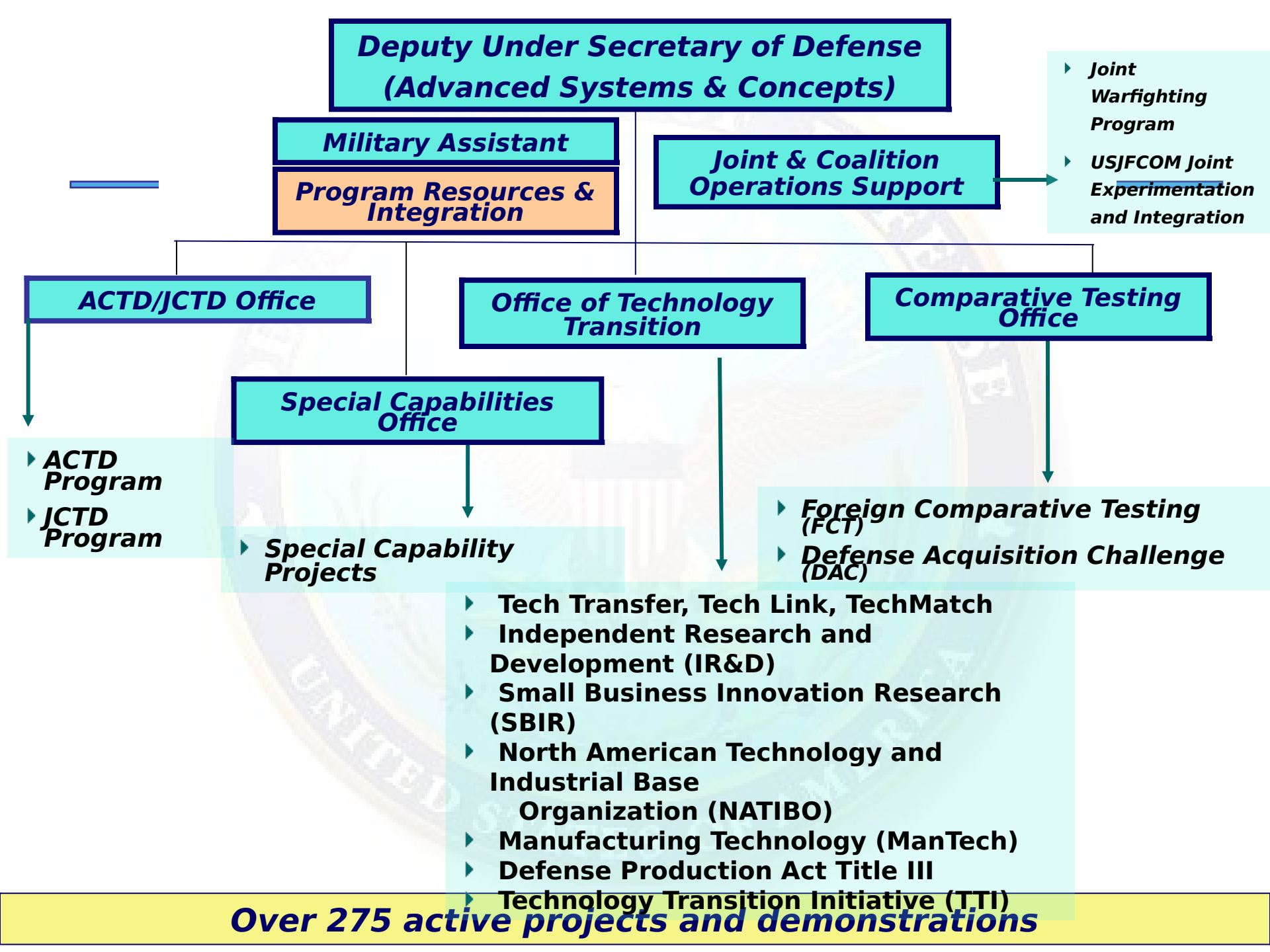

***Trey Carson***

***ACTD Resource Manager***

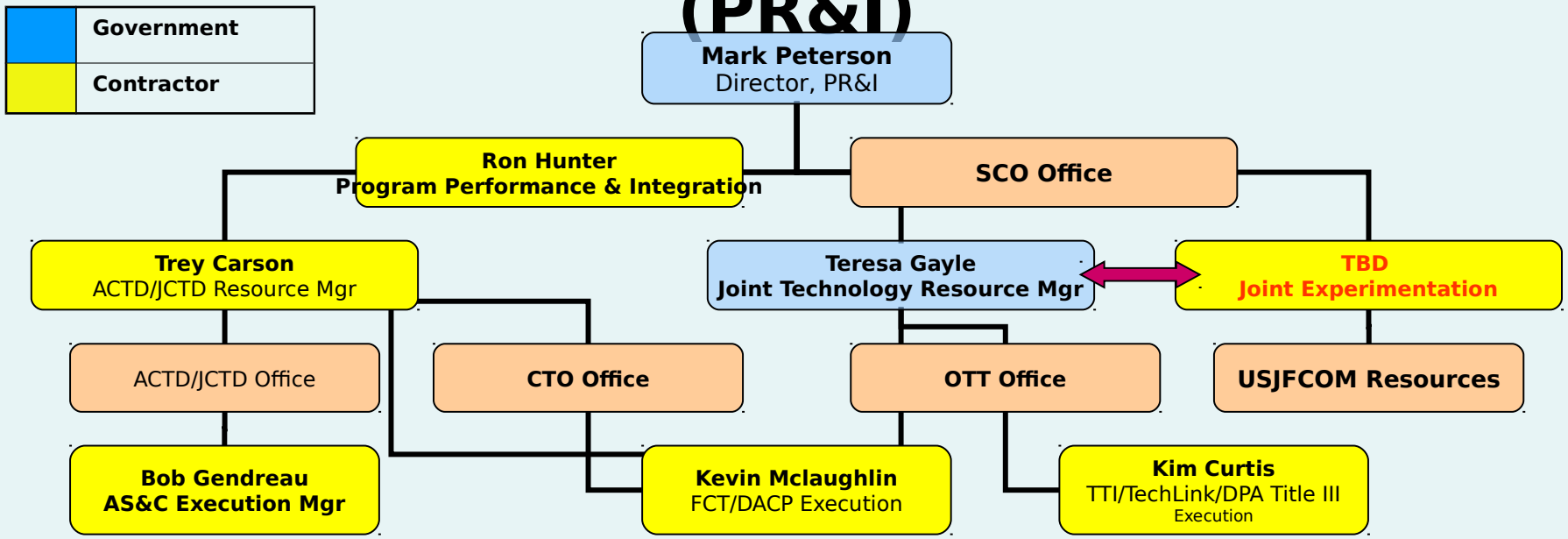
***Asst Deputy Under Secretary of Defense***

Advanced Systems & Concepts

***www.acq.osd.mil/actd***


Deputy Under Secretary of Defense (Advanced Systems & Concepts)
Military Assistant
Program Resources & Integration
Joint & Coalition Operations Support
Joint Warfighting Program
USJFCOM Joint Experimentation and Integration
ACTD/JCTD Office
Office of Technology Transition
Comparative Testing Office
Special Capabilities Office
ACTD Program
JCTD Program
Special Capability Projects
Foreign Comparative Testing (FCT)
Defense Acquisition Challenge (DAC)
Tech Transfer, Tech Link, TechMatch
Independent Research and Development (IR&D)
Small Business Innovation Research (SBIR)
North American Technology and Industrial Base Organization (NATIBO)
Manufacturing Technology (ManTech)
Defense Production Act Title III
Technology Transition Initiative (TTI)
Over 275 active projects and demonstrations

# AS&C Program Resources & Integration (PR&I)




- **Resource Oversight:** Provides AS&C integrated fiscal oversight of twelve separate program elements, ensuring appropriate program optimization and internal controls are maintained. In FY 2007, with the addition of USJFCOM D/W lines, there will be 16 PEs.
- **PPBE Integration:** PR&I interfaces with DDR&E/P&P, AT&L/ARA, OSD(C), Military Services and Defense Agencies during each phase of Planning, Programming, Budgeting, & Execution.
  - **Planning:** QDR, SPG, JPG inputs. AS&C coordinated strategy developed.
  - **Programming:** POM input/reviews: Internal & External integration and review of over 275 projects.
  - **Budgeting:** PDM, PBD, Budget Submission & Review (16 budgets). Congressional response.
  - **Execution:** Over 275 separate funding documents executed annually. Midyear Reviews conducted and obligation oversight maintained.

# Today's Agenda

- **Advanced Systems & Concepts Overview**
  - **Joint Capabilities vs Service Centric Capabilities**
  - **Deliberate (Traditional) vs Agile Programs**
- **Planning Programming Budgeting and Execution (PPBE)**
- **The Advanced Concept Technology Demonstration (ACTD) Process**
- **The New FY 2006 Joint Capability Technology Demonstration (JCTD) Initiative**
  - **Way ahead**

**Interactive discussion encouraged throughout the presentation**

# What are Joint Capabilities?

## Unique Regional/Specified Mission Needs

***Capabilities beyond common core military elements required by warfighters to effectively function in operational environments for joint regional or specified missions.***

***(Foliage Penetrating Radar, Language Translators)***

## Joint Enabling Capabilities

***Additional capabilities required by warfighters to exercise joint command, and to enable core military elements to function effectively as a coherent joint force.***

***(Network Centric Operations, Common Op Picture, The GIG)***

## Multi-Service Core Capabilities

***Common denominator Military forces provided worldwide as self-integrated, self-sustaining echelons by the Services.***

***(C-130 Aircraft, Abrams Tank, Movement Tracking System)***

**Joint is an inter-Service reliance acting together as one - not a patchwork of deconflicted Service operations.**

**(General Tommy Franks,**

# Service-Centric Acquisition Challenged to Meet Joint Capability Goals

*Top Down Joint Needs*

**Planning Guidance**

**Joint Operating Concepts**
**Joint Functional Concepts**
**Integrated Architectures**

**Joint Capability Needs**

**Core Military Operating Concepts/Capabilities**

***Joint Capabilities Need***

***Mismatch limits attainment of joint capability goals***

*Bottom Up Acquisition Solutions*

**Joint Systems Integration**

**System Design**

**Technologies & CONOP Development**

**Service/Agency Acquisition Initiatives**

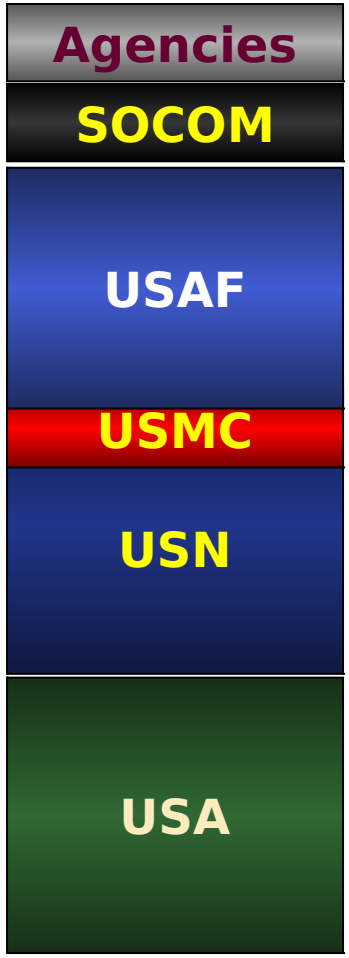
**R&D/Acquisition Processes**

# *Responsiveness to the Joint Warfighter*

## *What are the problems?*

- **Deliberate acquisition process optimized for peacetime and cold war**
- **Joint CoCom customers will always need some level of adaptive acquisition mission area support**
- **Current TOA obligations don't include joint peculiar needs, and might not effectively address joint common needs**
- **Prospect of diminishing total Defense TOA mandates efficient, integrated acquisition ruthlessly responsive to end user customer (joint warfighter) needs**

**"Will Be"**



# SPG and QDR 2006

## QDR

- ***"just as the U.S. forces operate jointly, so too must horizontal integration become an organizing principle for the Department's investment and enterprise-wide functions."*** **Further,** ***"The 2006 QDR provides new direction for accelerating the transformation of the Department to focus more on the needs of Combatant Commanders and to develop portfolios of joint capabilities rather that individual stove-piped programs…Moving toward a more "demand driven" approach should reduce unnecessary program redundancy, improve joint interoperability, and streamline acquisition and budgeting processes."***

## SPG

- ***"Reshape the defense enterprise to streamline processes and structures, improve portfolio investments responsiveness to the President of the United States and support to the Combatant Commanders, increase efficiency and enhance accountability across the enterprise."***

# Resource Perspective: Core Military Capabilities and Joint Enablers

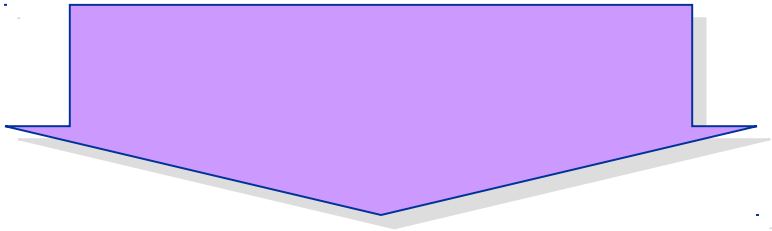


## Characterization of CoCom Needs:

- Core Service-specific capabilities (~8
- ☆ Joint military capabilities (~20%)

CTO & OTT Targets

ACTD/JCTD Target Area



**How do you define "Joint" ?**

## Nature of CoCom Joint Needs:

- Interactive, Multi-Service core military capa

CTO & OTT Targets

- ☆ Joint enabling capabiliti

ACTD/JCTD Target Area

- ☆ Unique Regional/Specified mission

ACTD/JCTD Target Area

# Joint Acquisition Models

*Advanced Systems and Concepts*

**Distributed Procurement** …multiple Services and/or agencies agree to acquire system elements with intention of combining in the field to yield a coherent joint operational capability.

Examples…JTRS, GCCS, AFATDs

Risk…Service-centric solutions migrate away from seamless interoperability.

**Trusted Service** …Single Services tasked or volunteered to act as DoD agent for acquisition of joint systems to be used by other Services.

Examples…GLOBAL HAWK, PREDATOR, DJC2, TBMCS

Risk…Joint aspects first sacrificed to emergent budget constraints

**Joint Program Office** …JPMO formed to develop, field joint capability

Examples…JPSD, JSF, GPS, JTRS

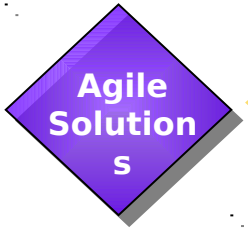
Risk…Services withdraw support from effort. Joint C[illegible]s proliferate.

**CoCom Direct Procurement** …CoCom refines requirement, then fields and, in some cases, sustains joint capability

Examples…SweDish, AT-4(CS), 5.56 Light Weight Machine Gun

Risk…Duplicated efforts if coordination mechanism not emplaced

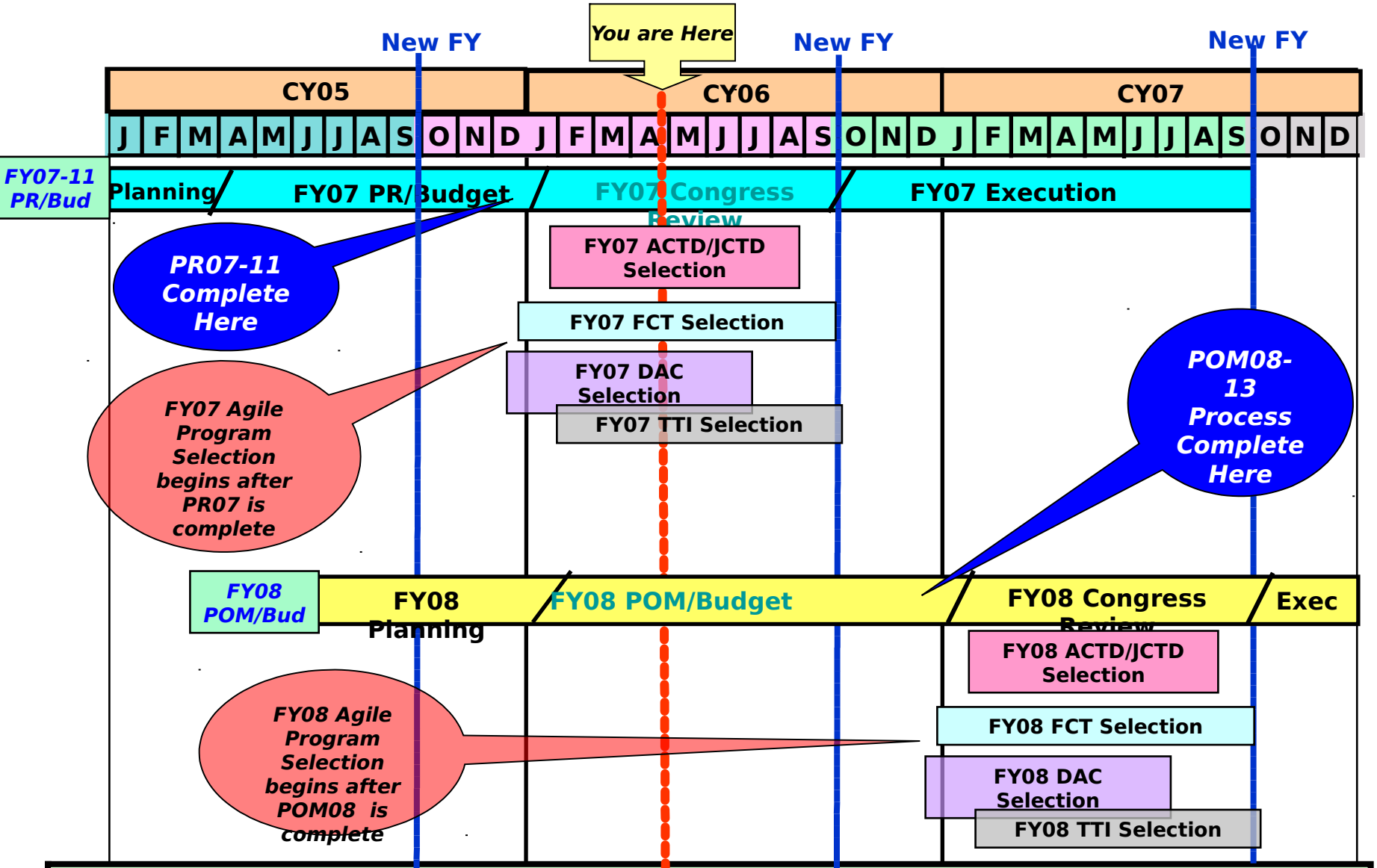
# Balanced Score Card Acquisition




- ✓ Rapid, responsive, flexible program
- ✓ Decentralized execution
- ✓ Transformation engine; innovation enabler
- ✓ Small, non-traditional business “on-ramp”
- ✓ “Try before you buy” cost control mechanism
- ✓ Potential spiral improvement generator

- ✓ Checks & balances for accountable acquisition
- ✓ Optimized for delivery of complex systems
- ✓ Methodical oversight and synchronization
- ✓ Includes sustainment resources
- ✓ Well adapted to individual Service cultures
- ✓ Scalable for large-scale military solutions

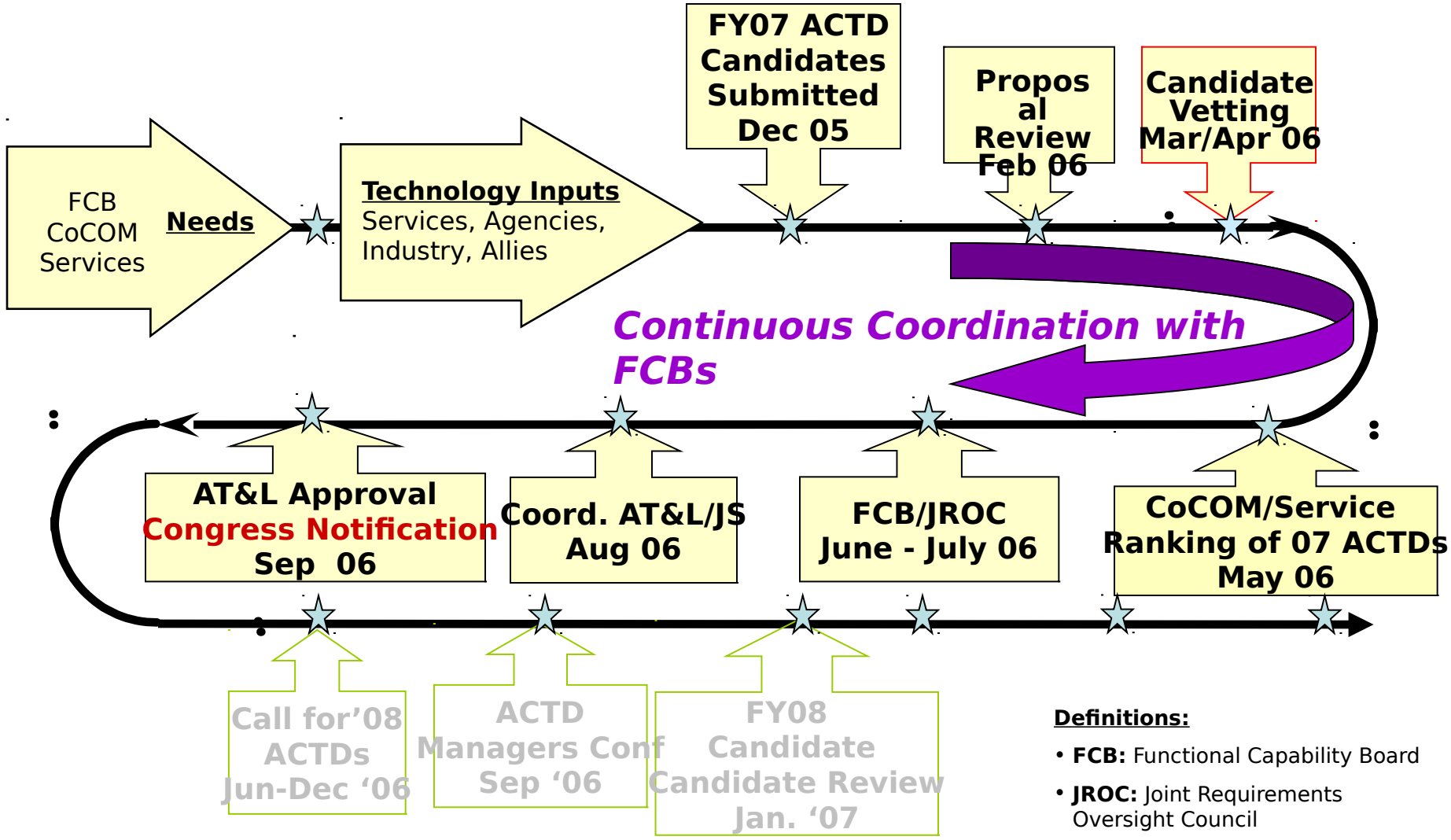
# AS&C Agile Programs and PPBE




***From a "Programmers Perspective," many of AS&C's Agile programs "inside" the PPBE process***

# ACTD FY-2007 ACTD/JCTD Program Timeline

**Selection Process for the FY 2007 ACTD/JCTD Candidates**

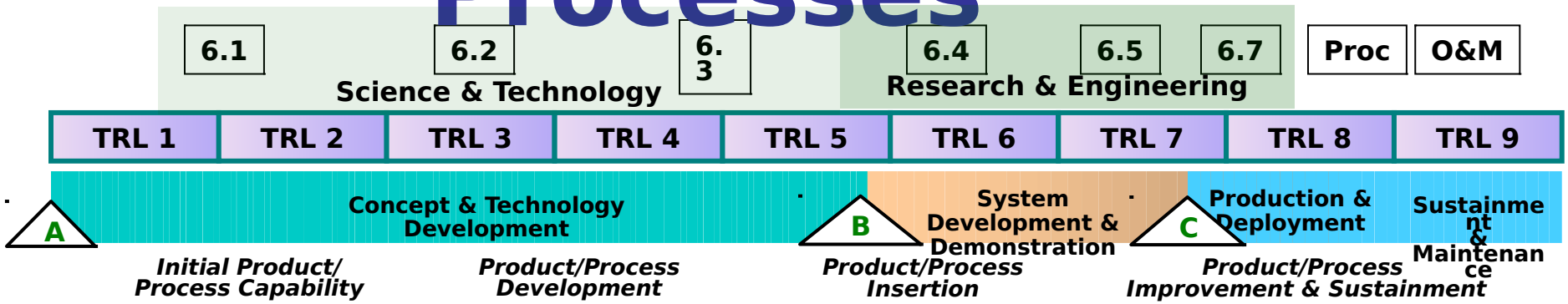



**Definitions:**

- **FCB:** Functional Capability Board
- **JROC:** Joint Requirements Oversight Council
- **CoCOM:** Combatant Commander

**ACTD to JCTD conversion occurs after JROC validation**

# Agile Acquisition Processes




*COCOM /Joint/Coalition focused – Demo 1-4 yrs* — *ACTD/JCTDs*

*Transition Enabler for successful ACTD/JCTDs – path for "joint peculiar" capabilities* — *JCTD Transition & DAE Pilot Program*

*Industry "On" Ramp – Test to Procure Tech Refresh* — *Defense Acquisition Challenge*

*Service, SOCOM Nominated - Test to procure* — *Foreign Comparative Testing*

*Congressionally Directed – DOD Lab Tech Push* — *Tech Transition Initiative*

*DoD technology transfer to Private Sector* — *TechLink*

*JFCOM execution as Joint Force Integrator* — *Joint Warfighting, Experimentation, & Integration*

*Essential Domestic technologies with National Security implications* — *Defense Production Act (Title III)*

*Manufacturing Technology (Service funded)*

*Independent Research & Development (Contractor Funding)*

Note: Grey indicates no OSD Defense Wide funding

# ACTD/JCTD Support to Joint Combatant Commanders

**ACTDs rapidly field emergent mature technologies to joint warfighters (TRL level 5-6).**

- Balanced emphasis on tailoring technology with associated Tactics, Techniques, & Procedures (TTPs) to user needs

- **Primary customers for ACTDs are joint Combatant Commanders**
  - Joint, Coalition, & transformational opportunities are priorities
  - ACTDs require a Lead Service/Agency and a CoCom Sponsor

- **ACTDs are not an acquisition/procurement program**
  - Charter is to minimize processes that delay rapid fielding of demonstrations
  - Overcoming resistance to transformational concepts
  - "Rack & Stack" voting process used to select Candidate slate inside the Planning, Programming, Budgeting & Execution (PPBE) process
    - Example: FY 2007 selection is in process now

**Since 1995, Over hundred and fifty ACTDs have been initiated. 70**

# ACTD/JCTD Objectives

Predator: 1995 ACTD

**Formal Success Objectives**

- ✓ **Rapid transition to Defense Program of Record**
- ✓ **Satisfaction of operational requirement with residuals**
- ✓ **Confirmation that technology/op concept appropriate for joint military use**

  - or not !

**Informal Success Objectives**

- ✓ **Develop operational concepts (DOTMLFP) employing proposed technologies**
- ✓ **Contribute technical elements into existing/new programs**

**Informal Failure Indicators**

- **Overlook technologies to solve known military problems**
- **Allow spiraling technologies/requirements to postpone transitions**
- **Pursuing low risk technologies to ensure successful demonstrations**
- **Focus on popular single-service ACTDs at expense of tough joint efforts**

# FY 2007 RDT&E President's Budget Request

**DDR&E/AS&C Transition Programs are Highly Leveraged across Service and Agency Budgets**
**Less than 1% of RDT&E each year**

| Components (All RDT&E) | $B |
|---|---|
| USA | **10.9** |
| USAF | **24.4** |
| USN/USMC | **16.9** |
| Def Agency & SOCOM | **20.8** |

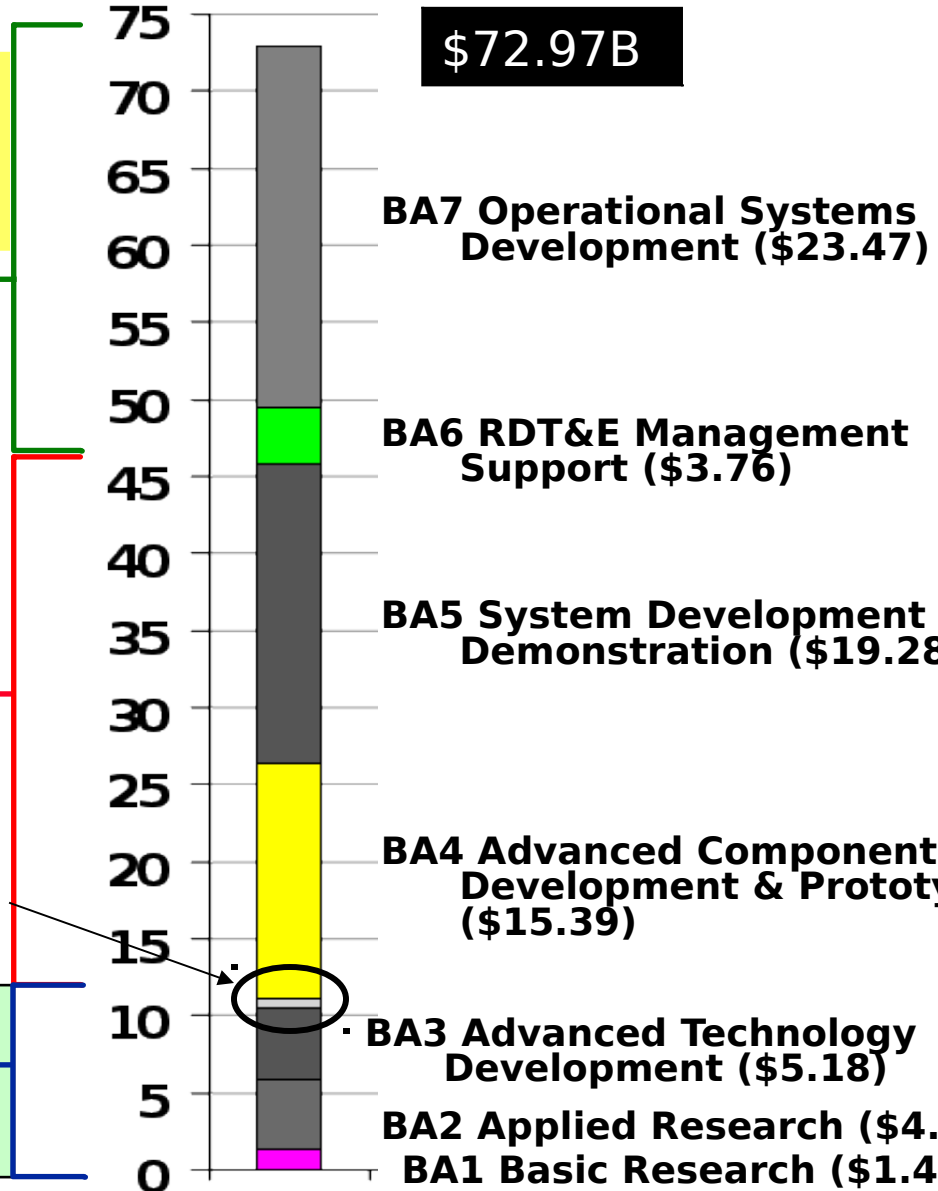
**DDR&E/AS&C Total is $0.552 B**
**(Includes USJFCOM $0.220B)**

**Technology Base (BA1 + 2) = $5.90B)**

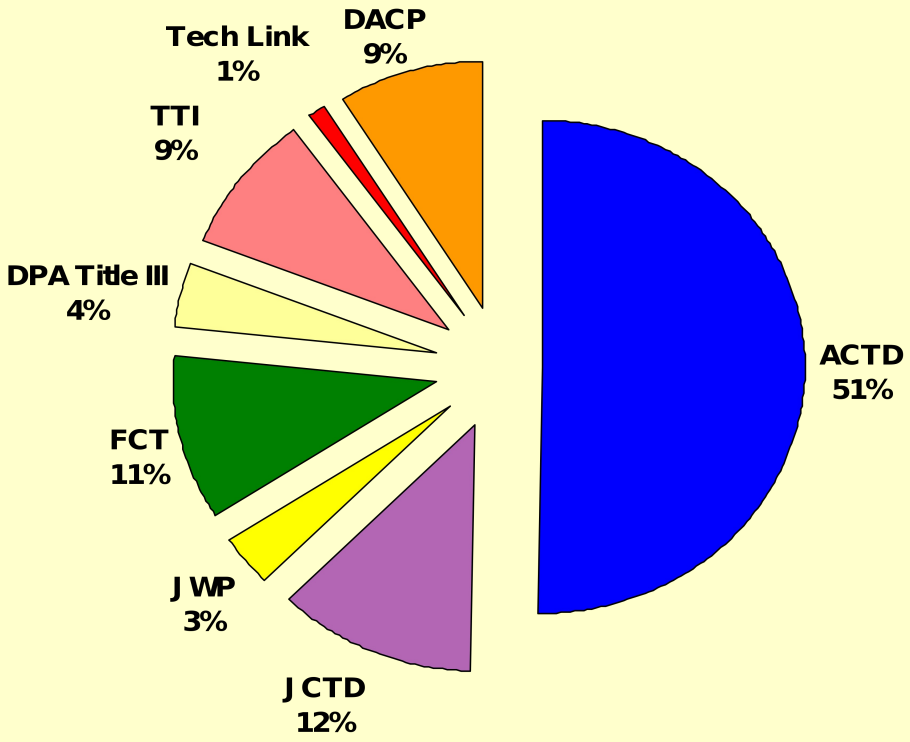
**Science and Technology (BA1 + BA2 + BA3 = $11.08B)**
**15% of RDT&E**

**(BA6 + BA7 = $27.23B)**

**Development (BA4 + BA5 = $34.66B)**



# FY06 AS&C Resources Overview
# Direct Oversight of $325M



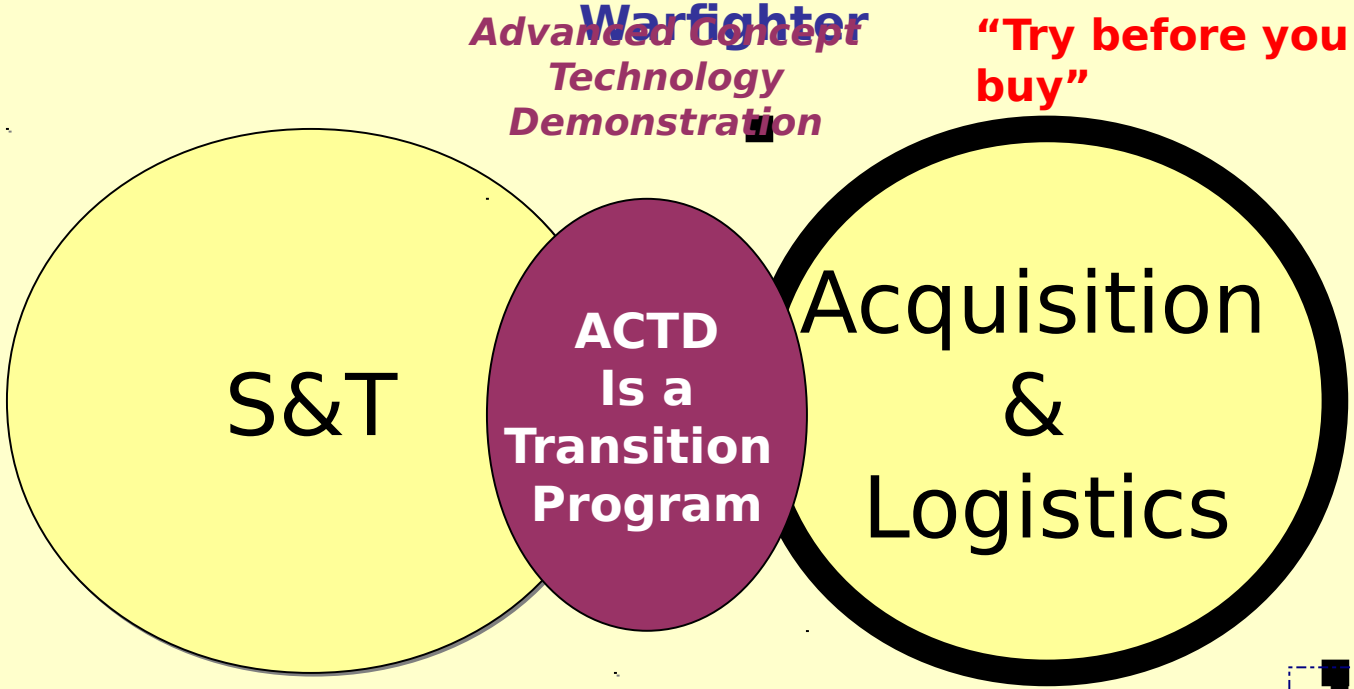

| Program | $M | # Projects |
|---|---|---|
| Advanced Concept Technology Demonstration (ACTD) (BA-3) | $164 | 70 |
| Joint Capability Technology Demonstration (JCTD) (BA-3/4/5 & Procure) | $40 | 6 |
| Joint Warfighting Program (JWP)-BA-3 | $10 | 4 |
| Foreign Comparative Testing (FCT)-BA-6 | $36 | 69 |
| Defense Production Act (DPA) Title III | $13 | 16 |
| Technology Transition Initiative (TTI)-BA-3 | $30 | 43 |
| TechLink (BA-3) | $2 | 55 |
| Defense Acquisition Challenge Pgm (DACP)-BA-5 | $29 | 64 |

- **RDT&E/DW: $311M**
- DPA Title III Procurement: $13M
- OSD Maj Equip-JCTD Procure: $1M

Source: FY 2006 President's Budget

# ACTD Projects Positioned between S&T & Acquisition

## Filling the Gap between S&T and Acquisition for the CoCom Customer—Providing Relevant tools to the Joint and Coalition Warfighter




**Deliverables:**

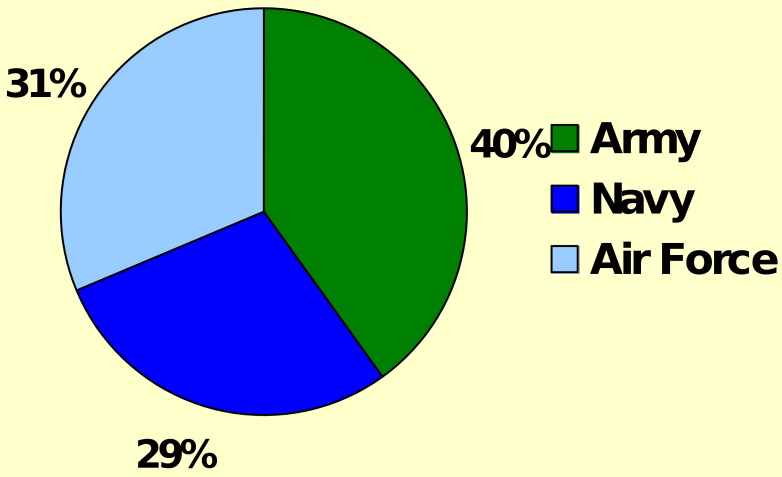
- Concept of Operations
- Military Utility Assessment
- Residual Capability leave behind
- **Business Case**

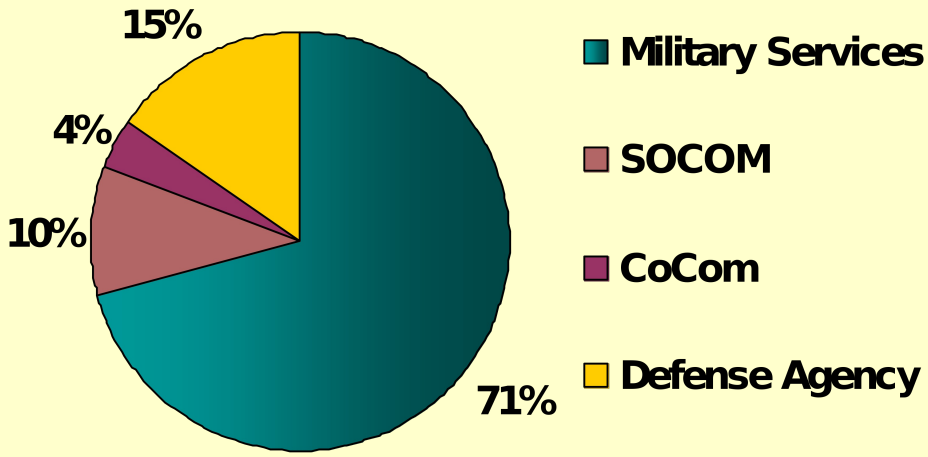
**71% of all ACTDs transition at least one product into a warfighting capability**

***ACTDs are not acquisition programs, but should not be science projects***

# Advanced Concept Technology Demonstration (ACTD)
## DUSD (AS&C) FY-2005 Actuals
## *(Where does AS&C send its ACTD dollars?)*

| **Total Available: $ 206,718** | |
|---|---|
| | ($000) |
| **Army** | **58,618** |
| Navy | **41,957** |
| Marine Corps | - |
| Air Force | **46,010** |
| **Total Service:** | **146,586** |
| | |
| CoCom | 7,784 |
| SOCOM | 20,591 |
| DoD/Agency | 31,758 |
| **Total Non-Service:** | **60,132** |

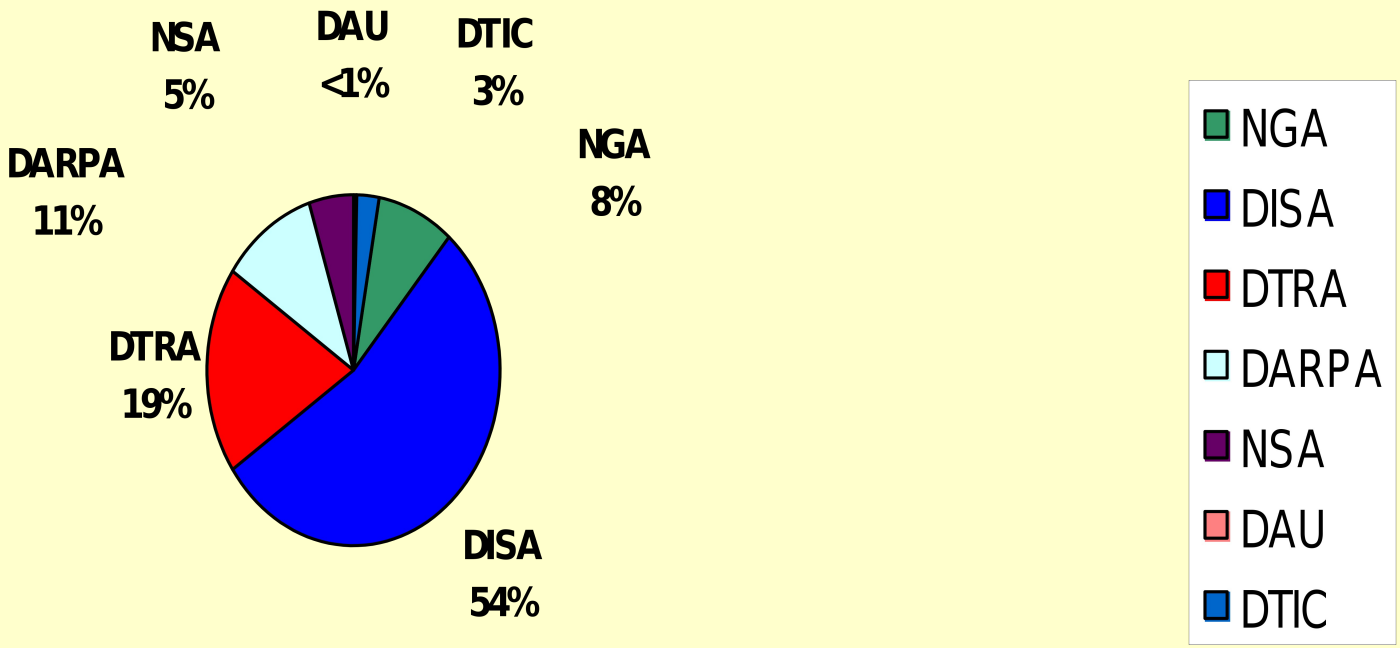



**RDT&E-DW/BA-3/PE:**

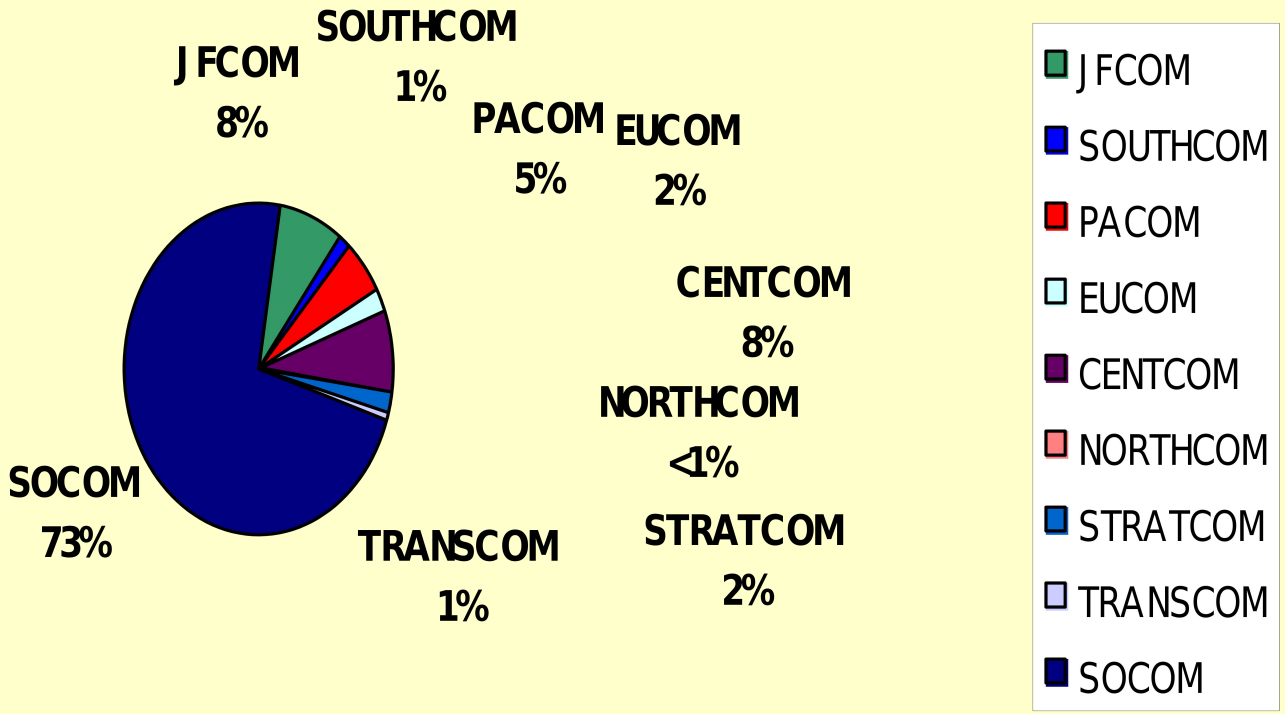
# DUSD (AS&C) FY-2005 Actuals
## *(Where does AS&C send its ACTD dollars?)*

## Defense Agency Break-out of AS&C FY-05 Resources

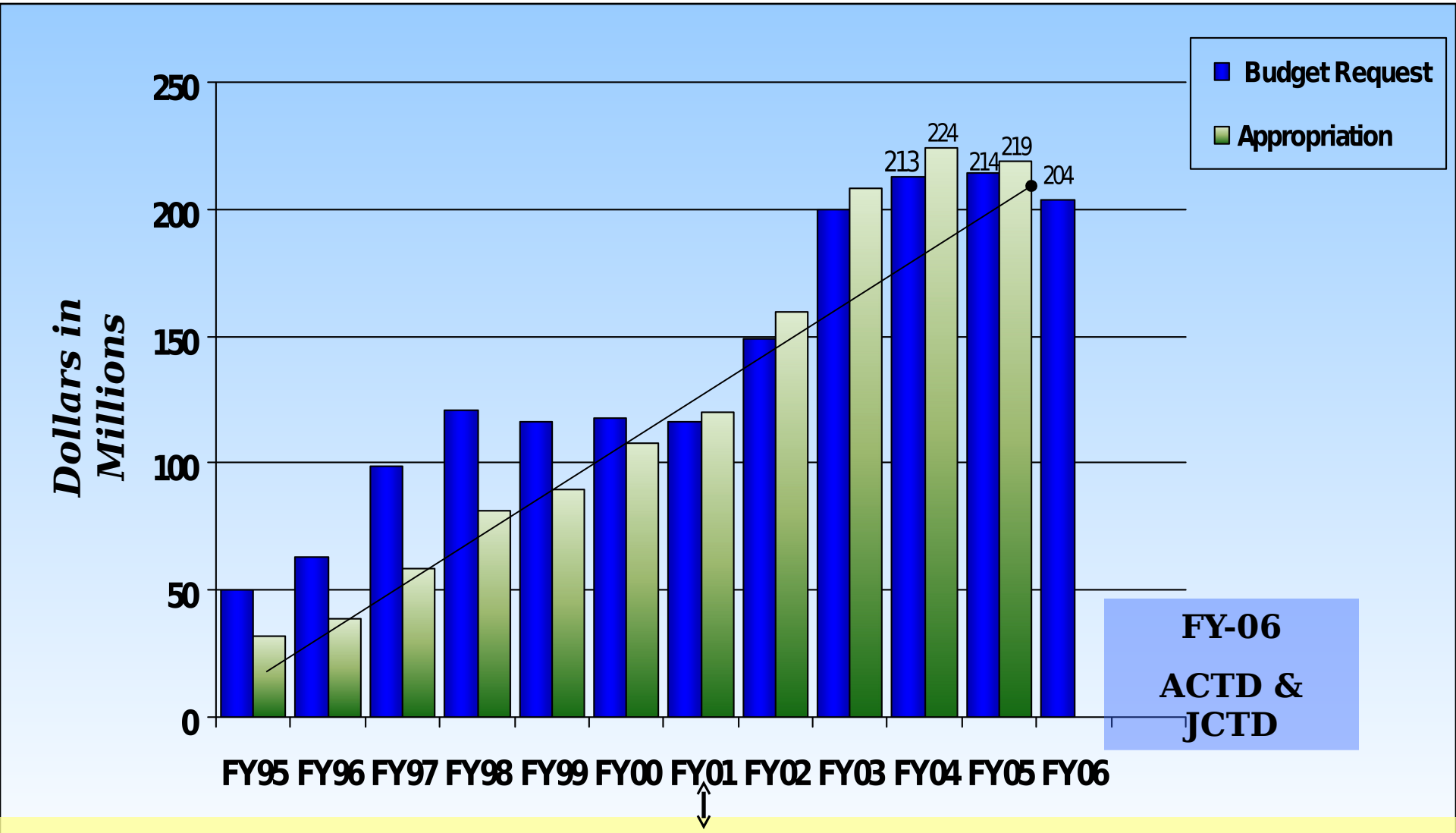


# DUSD (AS&C) FY-2005 Actuals
## *(Where does AS&C send its ACTD dollars?)*

## COCOM Break-out of AS&C FY-05 Resources



# ACTD Historical Funding Profile
# Budget Vs. Appropriation




**Starting in FY 2001 Congress fully supports ACTD**

# ACTD Selection Process

**FY 2005 Candidate Selection Process used as an example**

**Question: How many have been through the ACTD Selection Process?**

# Key Steps in the Process
# FY06 ACTD Selection



- Call for Candidates due (Oct 2004)
- Concept Formulation and Initial Socialization
- Breakfast Club (Jan 2005)
- Concept Refinement and Socialization
- CoCom and Service Ranking (Mar/Apr 2005)
- AT&L/JS Coordination (May 2005)
- JROC Review/Validation (Sep 2005)
- AT&L Approval
- DoD Budget Approval
- ➢ Congressional Report/Notification (30 Day)
- Implementation Directive Signed by DUSD(AS&C)
- ACTD Start

***Congressional Report submitted Nov 8; 30 days = Dec 9.***

***Continuing Resolution – anticipate Dec 17.***

# Breakfast Club
# ACTD Candidate Review



- *Provides Critical Advise to the DUSD(AS&C) for Candidate Selection and Improvement*
  - Confirmation of the Military Utility
  - Validation of the Technical Solution
    - Best of Breed
    - Deconflicts  Duplication
    - Technical Maturity
  - Validation of the ACTD Plan
    - Adequacy of Demonstration Approach
    - Rational Schedules
    - Potential for Transition
  - Review of the Funding Plan
    - Real Sources
    - Other Potential for Sources

# Concept Refinement and Socialization



- Continued ACTD Planning
- Response to Breakfast Club Input
- Coordination with all Players
- Lunch Bunch Process Continues Until JROC Presentation
  - Refined Briefing
    - Executable Plan
    - Minimum Outstanding Issues
    - Solidified Funding sources
  - Implementation Directive

# CoCom and Service Ranking



- Each CoCom and Service Ranks Candidates
  - Greatest Benefit to Least Benefit
- Candidate Briefings on SIPRNET
- AS&C Combines Score
  - Equal Weight for all CoComs and Services
- Output:
  - Priority Ordered List of Candidates
  - Identification of CoCom Priorities

# FCB/JROC Review



- Functional Control Board Assessment of Candidates within Their Responsible Areas
  - Proper Alignment with Predominate Interest
  - Conformance to Area Roadmap
  - Advice to the JROC
- Joint Review Oversite Committee (JROC) Review
  - Confirmation of Candidates
  - Approved Implementation Directives
  - Validated Initial Capabilities Document Equivalency

# Congressional Notification



- New Start Notification required for all ACTDs (Public Law)
- Congressional Report were required for ALL ACTDs each year, not just “new starts” prior to FY07
- Cannot Obligate RDT&E/DW resources until 30 days AFTER the Congressional Report reaches Defense Committees
- We are anticipating relief of withhold of “ongoing” ACTD funds---positive response from HAC-D

# Implementation Directive Signed by DUSD(AS&C)



- DUSD Signature on Implementation Directive is the Formal Start of the ACTD

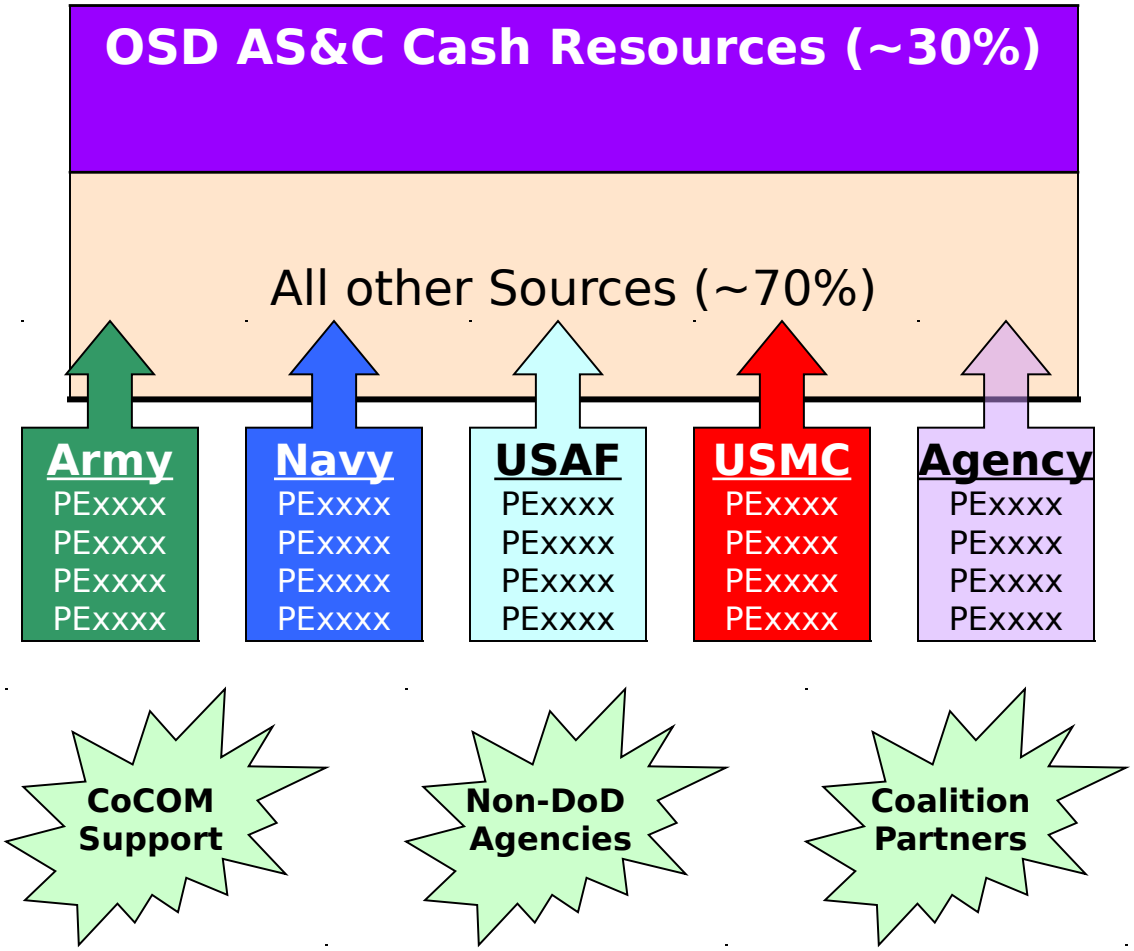
- Prerequisites Are:
  - AT&L Approval of Candidates
  - Signed DoD Budget
  - Completion of Congressional Notification
  - ID has been coordinated and all Other Partners have signed

# Current ACTD Funding Model

**Challenges:**

- **Front-end (start-up) and tail-end (transition) funding issues create serious PPBE challenges.**
- **Little incentive for Service participation as New ACTDs create immediate unfundeds.**
- **Significant start-up and demonstration delays after JROC decision: Average 6 month delay waiting for Implementation Agreements.**
- **Many different Program Elements fund ACTDs (Little visibility at Service level—accountability challenges)**
- **Projects require sustained commitment of resources once initiated.**
- **Unfunded Requirements (UFRs) during execution cause significant risk and disruption as OSD tries to "share" the UFRs with stakeholders.**

***Goal is to initiate ACTDs within months of a JROC approval. However, two year PPBE process creates Service challenge in funding new ACTDs. (Difficult to achieve before the third year)***



# Joint Capability Technology Demonstrations (JCTDs)

## New Initiative for FY06

- **A coherent approach that provides a means for joint and coalition S&T to transition without traditional barriers (a “cradle to grave” model).**
- **Developed to address concerns of CoComs, USD (AT&L) and Comptroller, GAO, DSB, & Congressional Staff.**
- **FY06 JCTD Business Model established using only DUSD (AS&C) resources.**

***JCTDs Planned to Replace ACTDs in 3-5 Years***

# Performance Metric Comparison
# ACTD vs. JCTD

| Performance Metric | ACTD | JCTD |
|---|---|---|
| **Project Selection Focus** | **Threat Based:** Shared Military Service and CoCom influence | **Capability Based:** Greater CoCom influence looking at nearer term **joint/coalition** needs.. |
| **Spiral Technologies** | No Metric currently established | **Spiral Technology** available within **one year** of JCTD initiation |
| **Final Demonstration Completed (Starting Point: Approved ID)** | 3 to 4 years after initiation (Implementation Directive (ID) Signed) | **50% completed final demo** by the end of the 2nd year. Goal - All JCTDs completed inside 3 years. |
| **Shared Funding and Visibility of resources** | OSD provides no more than 30% of the budgeted resources. Funding provided from many different program elements. | **OSD provide significantly more funding** (often greater than 30%, in some cases a majority of project funding), especially in the first two years. |
| **Military Utility Assessment (MUA) conducted by an independent activity** | MUA traditionally tied to a specific planned exercise for evaluation | **JCTDs not necessarily tied to an exercise**. Greater flexibility to establish military utility via operational "real-world" demonstration or specifically designed test/venue |
| **Transition of technology** | 70% of ACTDs transition at least one product to sustainment | **80% of JCTDs transition at least 50% of their products to sustainment** |

Source: FY 2007 President's Budget

– NEW –

# Joint Capabilities Technology Demonstration (JCTD)

- ***COCOMs*** **remain the Customer – enhanced customer "capabilities pull"**
- **Builds on historically successful ACTD process**
  - **Balance "tech push" with "capabilities pull", focus on CoCom emerging needs**
  - **Maintains strong technical focus: work with services/agencies to push technology s**
- **Designed to increase speed of transformational, joint and coalition capabili**
  - **Increase number of rolling/mid year project starts**
  - **Aim to introduce 1st spiral of new capability into field within first 12 months**
  - **Goal: final demo phase starts w/in 2 years, project complete in 3 years**
- **Increased focus on transition to long term warfighter support**
  - **Goal: 80% of JCTDs transition 50 percent of products (POR, residual support, GSA, etc.)**
- **Accelerate time to demonstration by increasing OSD funding in the first two years – with Transition funds!**

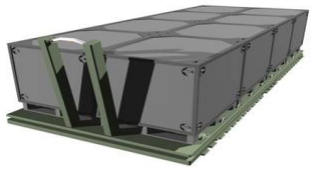
Four JCTDs Initiated in 2006

- CHAMPION
- JMIDS
- CMA
- LARGE DATA

## *Transformational*

**Counter-intelligence Human-intelligence Advanced Modernization Program/Intelligence Operations Now (CHAMPION)** will demonstrate timely CI and HUMIT from the tactical to the strategic level.

## *Joint*



**Joint Modular Intermodal Distribution System (JMIDS)** will demonstrate a seamless logistics system that will improve true joint Service and commercial interoperability.

## *Coalition*

**Comprehensive Maritime Awareness (CMA)** will include coalition partners in extensive maritime sharing demonstrations. Includes tracking, tagging, and collaboration technologies. USNORTHCOM is also participating for homeland security application.

**GAO's Michael Sullivan before House Armed Services Tactical Air and Land Forces Subcommittee, March 9, 2005:** ***"We are encouraged by recent actions taken by DOD to initiate a Joint Capabilities Technology Demonstration {JCTD} business process as it is intended to meet joint and coalition forces needs…"***

# BACK-UP SLIDES

# JCTDs Offer Significant Benefits

## ACTDs

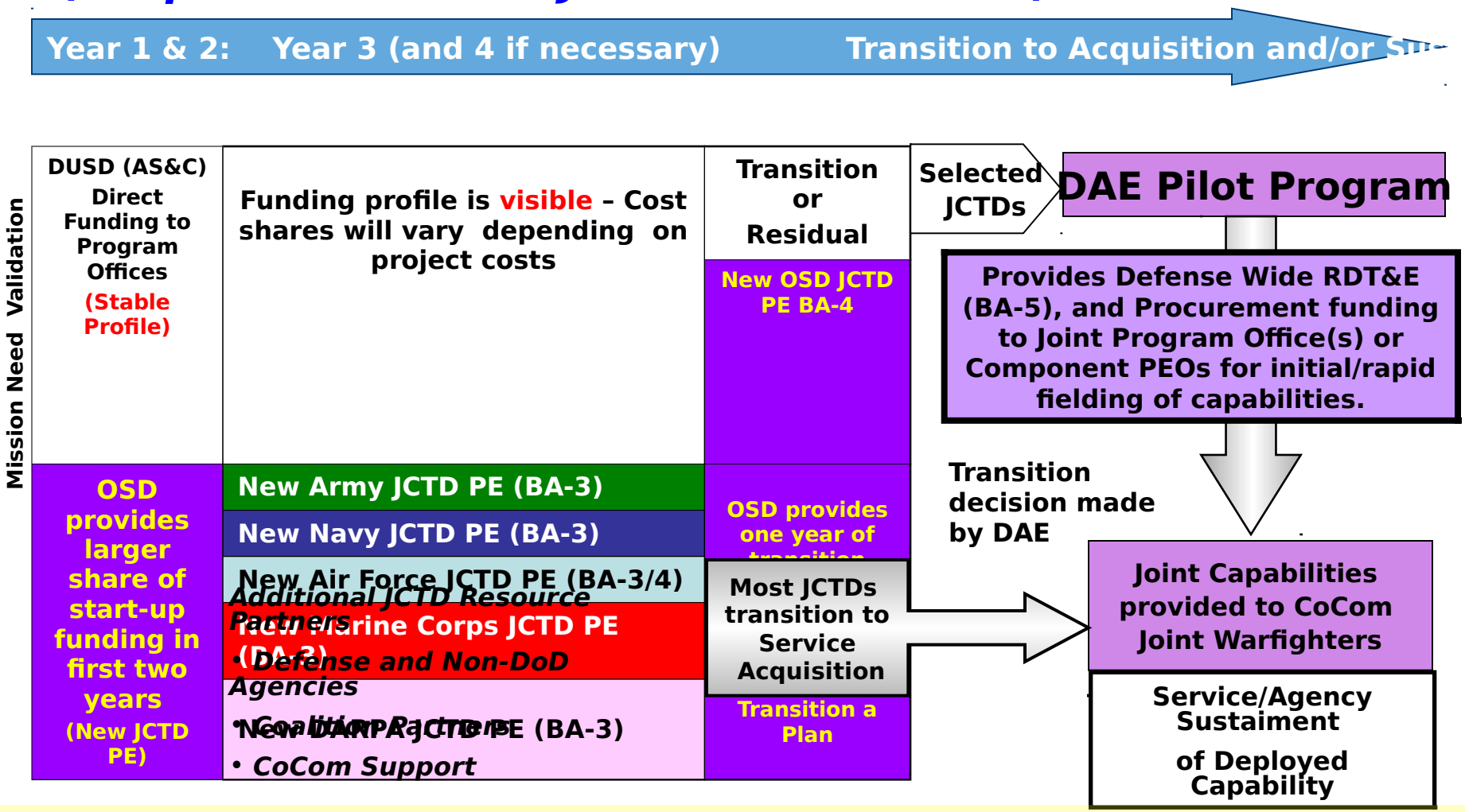
- Innovative & joint efforts
- Partnerships serving CoCom needs beyond core Military capabilities
- Unique perspective on challenges of transitioning proven joint capabilities into acquisition

## JCTDs

- Tailors solutions to CoCom needs
- Yields faster starts, faster deliveries
- Structures funding to permit Service participation without "breaking" programs
- Pilots "top-down" DAE process for joint acquisition
- Provides "window on joint investment"

***"DoD has a long way to go to ensure that our acquisition process achieves the appropriate jointness and interoperability needed in the 21st Century"*** **SECDEF Snowflake (2004)**

# Joint Capability Technology Demonstration View of JCTDs with DAE-Directed Transition Pilot Program (Graphic view of the JCTD FYDP Timeline)


Year 1 & 2:
Year 3 (and 4 if necessary)
Transition to Acquisition and/or Sus
Mission Need Validation
DUSD (AS&C) Direct Funding to Program Offices (Stable Profile)
Funding profile is visible – Cost shares will vary depending on project costs
Transition or Residual
New OSD JCTD PE BA-4
OSD provides larger share of start-up funding in first two years (New JCTD PE)
New Army JCTD PE (BA-3)
New Navy JCTD PE (BA-3)
New Air Force JCTD PE (BA-3/4)
New Marine Corps JCTD PE (BA-3)
New DARPA JCTD PE (BA-3)
OSD provides one year of
Most JCTDs transition to Service Acquisition
Transition a Plan
Additional JCTD Resource Partners
• Defense and Non-DoD Agencies
• Coalition Partners
• CoCom Support
Selected JCTDs
DAE Pilot Program
Provides Defense Wide RDT&E (BA-5), and Procurement funding to Joint Program Office(s) or Component PEOs for initial/rapid fielding of capabilities.
Transition decision made by DAE
Joint Capabilities provided to CoCom Joint Warfighters
Service/Agency Sustainment of Deployed Capability

***Limited number of Selected "Joint Peculiar" JCTDs may serve as DAE pilot transitions.***

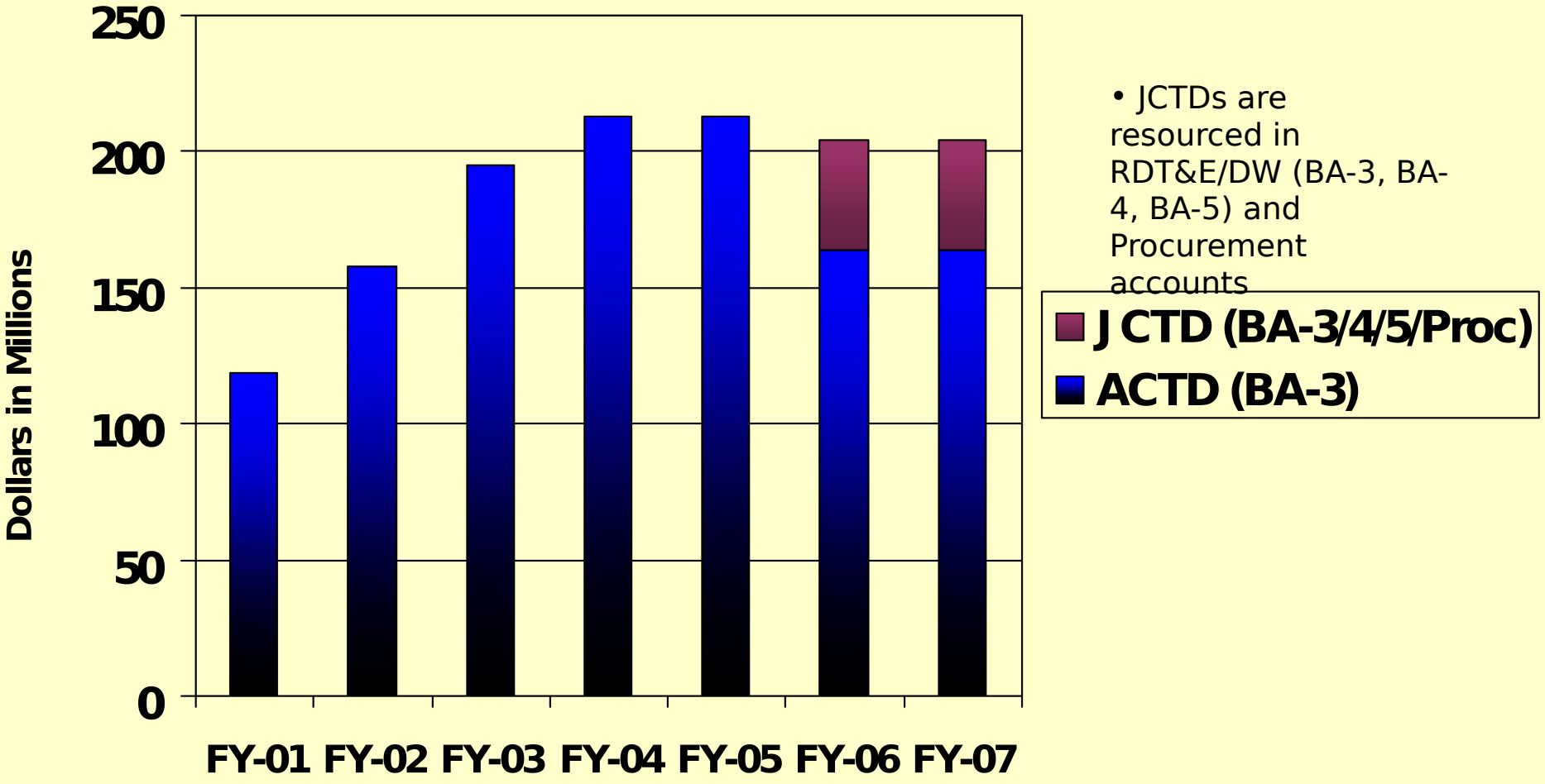
***Most JCTDs will transition through normal Service POM processes***

# DUSD (AS&C) Direct Funding

## ACTD & JCTD Programs

## (Actuals & FY06 President's Budget)

As of February 2005




**JCTD program initiated in FY 2006. Three to five year transition from ACTD to**

# Joint Capability Technology Demonstration (JCTD)

## Four part 3-5 year transition

**The JCTD model will further enhance the ACTD program**

1. **Front end incentive funds** - **to encourage participation without breaking Service core programs. Also provides stability of funding.**

2. **Creation of Defense Agency/Service and DARPA Program Elements**
   - **Visibility and Accountability of funds**
   - **Allows time for Services to POM**

3. **Transition funding** (New OSD RDT&E BA-4) - **to bridge the S&T "Valley of Death"**

4. **DAE Pilot program** – Transition "Joint Peculiar" systems into a fielded capability (New OSD PEs: RDT&E BA-5, Other Procurement)
   - **Tracking joint capability through acquisition into initial sustainment**

***"Cradle to Grave" Approach for fielding critical Joint Capabilities***

# Why Evolve ACTDs To JCTDs Now?

- **"It's the right thing to do": (ADM Fargo, Previous USPACOM)**
  - **CoCom customers need an early voice in needs process that responds quickly.**
  - **AT&L can provide a compelling joint approach as an answer to:**
    - Starting fast (inside the PPBE process).
    - Prevents breaking Service programs at the start of each ACTD.
    - Addresses the "Valley of Death" between successful demonstrated capabilities & transition to acquisition/sustainment.
    - GAO, Congressional, DSB, and other studies which support the philosophy of the JCTD initiative.
- **The time is right:**
  - JCTD fits the transformation and GWOT initiatives of the Department
  - Directly supports the SECDEF's goals of shifting to a more rapid, joint capability process with increased CoCom influence.

# Future for JCTD?

- **Program Review 2007**
  (fund the new Defense Wide Program Elements)
- **QDR may influence the JCTD initiative**
  *"DoD has a long way to go to ensure that our acquisition process achieves the appropriate jointness and interoperability needed in the 21st Century. As we move forward with the QDR, we absolutely must transform the acquisition process."*
  SECDEF Fall 2004

- **Congressional and GAO Interest**

***"Finally, I will add that we are encouraged by recent actions taken by DOD to initiate a joint capability technology demonstration business process as it is intended to meet joint and coalition forces needs*** *and promotes many of the good practices we outlined above.* ***To be successful, this process must have the authority and clout to overcome traditional barriers and the tools necessary to drive a knowledge-based, evolutionary acquisition approach."***

**GAO Testimony before the HASC Subcomittee on Tactical Air & Land Forces by Michael Sullivan, Director, Acquisition and Sourcing Management**

# COMPLETED ACTDs Deployed in Recent Conflicts

Updated Dec 2004

| Completed ACTDs Used in Recent Conflicts | OAF | OEF | OIF | NE | O |
|---|---|---|---|---|---|
| ➢ Adaptive Course of Action | | | | X | X |
| ➢ Advanced Joint Planning | X | X | X | X | X |
| ➢ Airbase/Port Biological Detection | | | X | X | X |
| ➢ Area Cruise Missile Defense | | | | | X |
| ➢ Battlefield Awareness & Data Dissemination | | | X | X | X |
| ➢ Chemical Add-On to Biological Detection | | | X | X | X |
| ➢ Coastal Area Protection | | | X | | X |
| ➢ Coherent Analytical Computing Environment | | | | | X |
| ➢ Common Spectral MASINT Exploitation | | | | X | X |
| ➢ Consequence Management | X | X | X | X | X |
| ➢ Counterproliferation I | | | X | X | X |
| ➢ Counterproliferation II | | | | X | X |
| ➢ Counter Sniper | | | | | X |
| ➢ C4I for Coalition Warfare | | X | X | | X |

Key

OAF - Operation Allied Force – Kosovo
OEF - Operation Enduring Freedom – Afghanistan
OIF - Operation Iraqi Freedom – Iraq
NE - NobleEagle - US Air Space
O - Other

Note: Other includes conflicts and operations like providing support to USFK, the Space Shuttle Columbia recovery operation and

# **COMPLETED** ACTDs Deployed in Recent Conflicts

| Completed ACTDs Used in Recent Conflicts | OAF | OEF | OIF | N |
|---|---|---|---|---|
| ➢ Global Monitoring of Space ISR Systems | | | | |
| ➢ High Altitude Endurance UAV – Global Hawk | | | X | |
| ➢ Human Intell & Counterintelligence Tool | | X | X | X |
| ➢ Info Assurance: Auto Intrusion Det Environment | | X | X | X |
| ➢ Integrated Collection Management | | | X | |
| ➢ Joint Biological Remote Early Warning | | X | X | |
| ➢ Joint Combat Identification | | X | | |
| ➢ Joint Logistics | X | X | | |
| ➢ Joint Medical Operations/Telemedicine | | | | X |
| ➢ Link-16 | X | X | X | X |
| ➢ Medium Altitude Endurance UAV – Predator | | X | X | |
| ➢ Military Ops in Urban Terrain | | X | X | |
| ➢ Navigation Warfare | | X | | |
| ➢ Precision/Rapid Counter-MRL | | | | |
| ➢ Personnel Recovery Mission Software | X | X | | |
| ➢ Precision SIGINT Targeting | X | X | X | X |
| ➢ Precision Targeting Identification | | | | X |
| ➢ Rapid Force Protection Initiative | | | | X |
| ➢ Small Unit Logistics | | | | X |
| ➢ Space Based Space Surveillance Operations | | | | X |
| ➢ Theater Air & Missile Defense Interoperability | | | | |
| ➢ Theater Precision Strike Operations | | | X | |
| ➢ Unattended Ground Sensors | | X | X | |

# ACTIVE ACTDs Deployed in Recent Conflicts

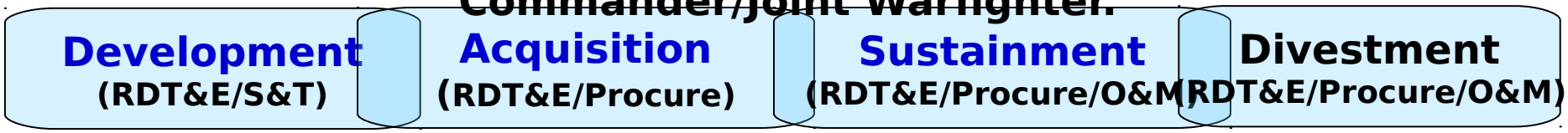
| Active ACTDs Used in Recent Conflicts | OAF | OEF | OIF |
|---|---|---|---|
| ➢ Active Network Intrusion Defense | | | |
| X | | | |
| ➢ Adaptive Battlespace Awareness | | | |
| X X | | | |
| ➢ Boundary Step | | X | |
| ➢ Coalition Theater Logistics | | X | X |
| ➢ Comm/Navigation Outage Forecast System | | X | X |
| X X X | | | |
| ➢ Computerized Operational MASINT Weather | | | X |
| X X | | | |
| ➢ Contamination Avoid at Seaports of Debarkation | | | |
| X | | | |
| ➢ Expendable Unmanned Aerial Vehicle | | | X |
| X | | | |
| ➢ ~~Ground-to-Air Passive Surveillance~~ | | | |
| X | | | |
| ➢ Homeland Security Command & Control | | | |
| X | | | |
| ➢ Joint Adv Health & Usage Monitoring System | | | |
| X | | | |
| ➢ Joint Area Clearance | | | X |
| X | | | |
| ➢ Joint Distance Support & Response | | | |
| X | | | |
| ➢ Joint Explosive Ordnance Disposal | | | X |
| X | | | |
| ➢ Joint Intelligence, Surveillance, and Reconnaissance | | | |
| X | | | |

Dec 2004

# Responsiveness to the Joint Warfighter

**(QDR/IPT #5/Acquisition & Support WG/Sub-group)**

**A responsive AT&L requires four focus areas during the life of a capability to adequately support the Customer - the Combatant Commander/Joint Warfighter.**




- **Does the current process encourage the Services to meet Joint needs? Are they being met?**
- **Is there a "deliberative" and "adaptive" process established that responds to both the long and short-term needs of the CoCom?....Should there be?**
- **Do the current needs definition and solution generation roles provide a "responsive" process to the Joint Warfighters?**

***USD (AT&L) is the Defense Acquisition Executive (DAE) responsible to the SECDEF for meeting all validated materiel needs – including those expressed by the Joint Warfighter***

# New "Joint Capability Technology Demonstration" (JCTD) Funding Model

## JCTD Overview

- First two years of Resources fenced by OSD – Held in OSD PE. Most compelling JCTDs will be resourced (incentive created)
- Year 3 (if necessary) funded by all stakeholders
- Transition Year funded by OSD—allow time for Services to POM for transition
- OSD can "afford more risk" protecting scarce resources.
- DARPA funds included in centralization model to cement partnership between development and transition (Congressional issue)
- Unfunded requirements easier to address without Service or Comptroller intensive reprogramming actions in year of execution
- New Model will provide clear visibility of total JCTD Cash budgeted and executed (OSD/C, Congressional & GAO

**FYDP Timeline (Based on 3 year Demo Phase)**

| 1st & 2nd Year Funding | Year 3 Services Provide $$ | Transition |
|---|---|---|
| | Spiral Technologies. Final demo all JCTDs in 3 years or less. | |
| OSD Provides at least 50% of the Resources during the first two years of the JCTD. JCTD BA-3 PE 0603648D8Z | New Army JCTD PE<br>New Navy JCTD PE<br>New Air Force JCTD PE<br>New Marine Corps JCTD PE<br>New DARPA JCTD PE | OSD provides transition dollars for successful JCTDs in BA-4 (0604648D8Z) |

**Agency**
PExxxx
PExxxx
PExxxx
PExxxx

Non-DoD Agencies

Coalition Partners

CoCOM Support

**DAE Pilot program**

BA-5 (0605648D8Z)

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OSD Maj Equip Procurement (0902[illegible]5D8Z)

Limited number of Selected "Joint Peculiar" JCTDs may enter the DAE Pilot program. Most JCTDs will

# Why Evolve ACTDs To JCTDs Now?

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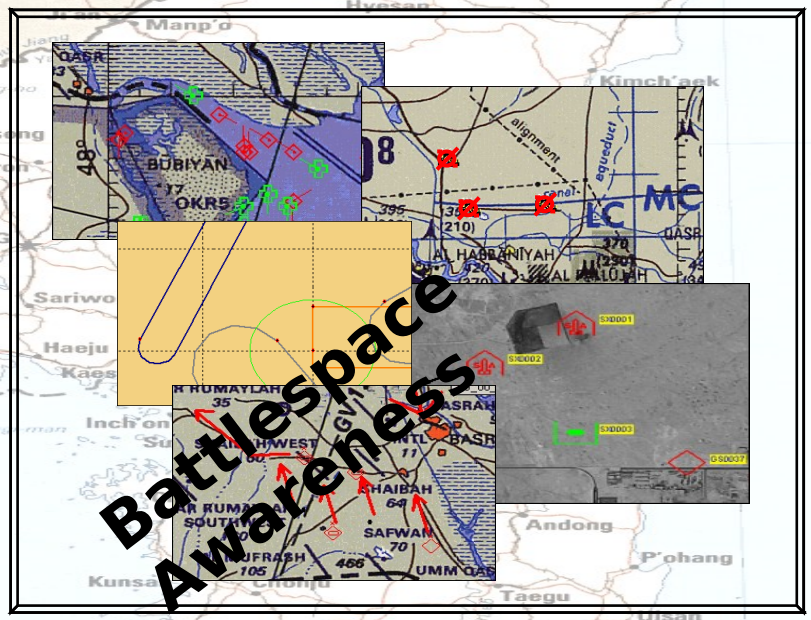
- **The time is right:**
  - JCTD fits the transformation and GWOT initiatives of the Department
  - Directly supports the SECDEF's goals of shifting to a more rapid, joint

# Joint/Coalition Technology C2 Success

**Product from the Theatre Precision Strike Operations ACTD (FY99-03)**

**Joint Automated Deep Operations Coordination Systems (JADOCS)**

**Over 2,000 workstations supporting CENTCOM, PACOM, EUCOM & USFK**




NFCS (Navy)

MIDB

AMPS

RAIDER

IOS

AFATDS

ASAS/RWS

GCCS-J

JWIS

GCCS-M

MCS

GCCS-A

TBMCS

C2PC

IPL

JSWS

NSL/RSL

CGS

TAIS

PFPS

USN-1
USA-8
USAF-3
USMC-3
CoCom-2
Defense-3
20

JADOCS used from the first day of the Iraq war (and still being

**AFATDS** **Advanced Field Artillery Tactical Data System (USA)**

- **Automated workstation providing automated support for field artillery operations, it also provides C3 for USA and USMC.**

**AMPS** **Aviation Mission Planning System (USA)**

- **Automated mission planning workstation designed for aviation brigade, battalion, and company commanders.**

**ASAS** **All-Source Analysis System Lite (USA)**

- **Provides a fused intelligence picture received from the supporting analysis control element and MCS.**

**C2PC** **Command and Control Personal Computer (USMC)**

- **Improves situational awareness and enhances operational and tactical decisions.**

**CGS/JSWS** **Common Ground Station/Joint Services Workstation (USA)**

- **Integrates imagery and SIGINT providing commanders at EAC, Corps, Divisions, and Brigades with NRT situational awareness, enhanced battle management and targeting capabilities.**

**GCCS-J** **Joint Global Command and Control System (DISA)**

- **Designed to be the single C4I system to support the warfighter from foxhole to command post.**

**GCCS-A** **Global Command and Control System (USA)**

- **Army specific variant**

**GCCS-M** **Global Command and Control System (USMC)**

- **Marine Corps specific variant**

**IOS** **Intelligence Operations Server (USMC)**

- **Provides Blue and Red feed for GCCS-M**

**IPL** **Imagery Product Library (NGA)**

- **IPL stores and disseminates imagery to customers worldwide**

**MIDB** **Modernized Integrated Database (DIA)**
**•Serves as the primary repository of intelligence data for the entire US DOD community, Australia, Canada, and the UK.**

**MCS** **Maneuver Control System Lite (USA)**
**•Provides commanders and op staff from the corps to battalion level witht the ability to collect, coordinate, and act on NRT Battlefield information.**

**NFCS** **Naval Fires Control System (USN)**
**•Automated mission-planning system for Naval surface-fire support with the ability to interoperate with the USA and USMC.**

**NSL/RSL** **No/Restricted Strike List (CoCom)**
**•Locally generated by the CoComs**

**PFPS** **Portable Flight Planning Software (USAF)**
**•Falcon View is the technology that supports PFPS that interfaces with JADOCS. It is a mapping system allowing the integration of various maps and geographically referenced overlays.**

**RAIDER** **Rapid Attack Information Dissemination and Execution Relay (JFCOM)**
**•Allows creation of a target package for specific paired aircraft, approved targets are then sent to the aircraft for immediate engagement.**

**TAIS** **Tactical Airspace Integration System (USA)**
**•Mobile communications and automated system for airspace management.**

**TBMCS** **Theater Battle Management Corps System (USAF)**
**•Air war planning tool which provides the ACE Commander the tools necessary to generate, disseminate, and execute the Air Tasking Order / Air Control Order.**

# ACTD Key Statistics

Total ACTDs/JCTDs Initiated
154
Total ACTDs On Hold
2
Total Active ACTDs/JCTDS 72
Total ACTDs Terminated/Return to Tech Base
19
Completed ACTDs (Complete + Tech Base + Terminated)
80

Completed ACTDs that have/are Transitioning Products (POR or Resid):

- ACTD Products Transitioned to Program of Record 25/80 or 31%
- ACTDs where Residuals Products are Meeting Needs 36/80 or 45%
- ACTDs Returned to Technology Base or Terminated 19/80 or 24%

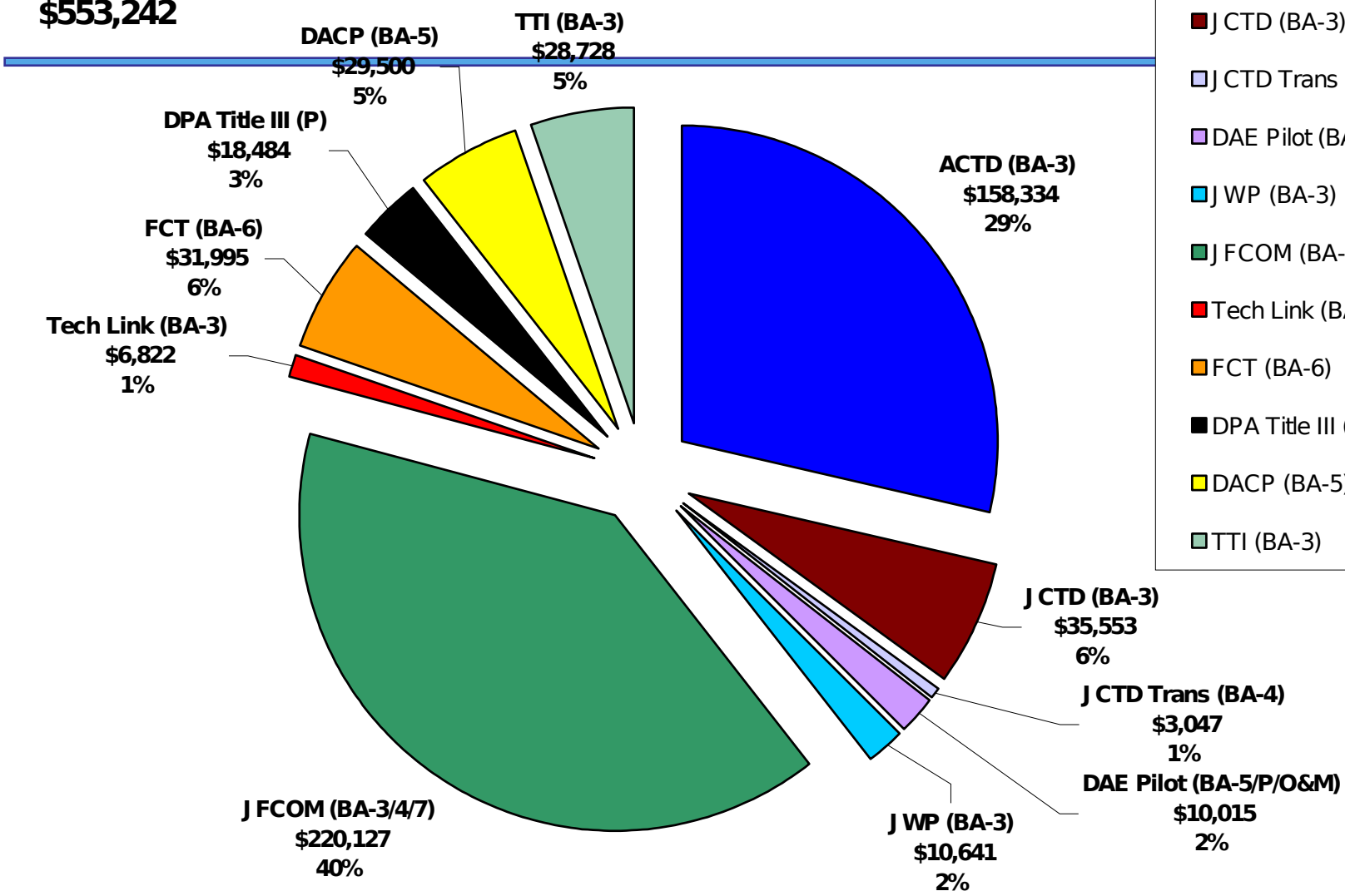
**76% of *completed* ACTDs have transitioned products into new or existin**
**PORs or are providing residual products to meet warfighter needs**

# FY 2007 DDR&E/AS&C Resource Oversight

## FY 2007 PBR ( dated Feb 2006)

**Total Current Estimate ($M)**

**$553,242**




Source: FY 2007 PresBud

**In FY 2007, USJFCOM funding is transferred from Navy to Defense-Wide Program Elements**